

**MDE****MARYLAND DEPARTMENT OF THE ENVIRONMENT**

1800 Washington Boulevard • Baltimore MD 21230

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Martin O'Malley  
GovernorShari T. Wilson  
SecretaryAnthony G. Brown  
Lieutenant Governor

NOV -- 7 2008

Robert M. Summers, Ph.D.  
Deputy Secretary

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NOV 21 2008

Air Pollution Division (C-150)

Mr. Shawn Connery  
W.L. Gore & Associates, Inc.  
2401 Singerly Road  
PO Box 1220  
Elkton MD 21922-1220

Dear: Mr. Connery:

Enclosed please find your Permit to Construct for the replacement of the existing extruder [CH1376] with a new extruder [CH74837] to be located at your facility at 2401 Singerly Road, Elkton MD. The permit contains both general conditions, which apply to all air quality permit holders in Maryland, and specific conditions, which apply to the existing boilers that you have proposed to be modified.

The new extruder [CH74837] qualifies as an "Off-Permit" change to the facility's Part 70 operating permit. The Department recognizes the permit to construct application as written notification of the proposed change. Please include the new extruder [CH74837] in the application for the next renewal of the Part 70 permit

If you have any questions regarding the issuance of this permit, please contact Marcellina Gurley at (410) 537-3225.

Sincerely,

Karen G. Irons, P.E., Administrator  
Air Quality Permits Program  
Air & Radiation Management Administration

KGI/aw

Enclosure

cc: Laramie Daniel with copy of permit  
Cecil County Health Department  
Jay Bozman with copy of permit  
EPA Region III





Martin O' Malley  
Governor

Shari T. Wilson  
Secretary

**DEPARTMENT OF THE ENVIRONMENT**

Air and Radiation Management Administration  
1800 Washington Boulevard, Suite 720  
Baltimore, MD 21230

☒ Construction Permit

☐ Operating Permit

PERMIT NO. 015-0079-7-0045

DATE ISSUED November 7, 2008

PERMIT FEE \$500.00 (PAID)

EXPIRATION DATE In accordance with  
COMAR 26.11.02.04B

**LEGAL OWNER & ADDRESS**

W.L. Gore & Associates, Inc.  
2401 Singerly Road  
Elkton MD 21921  
Attn: Mr. Shawn Connery

**SITE**

Cherry Hill Plant  
SAME  
CECIL County  
AI# - 128

**SOURCE DESCRIPTION**

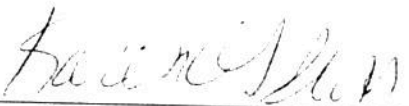
This permit to construct authorizes the installation of one (1) extruder [CH74837] to replace the existing extruder [CH1376] located in the Natural production area.


Five (5) drum dryers [CH#1045, CH#1314, CH#1381, CH#1632 & CH#2056] controlled by the Oxidizer Control System (OCS) and located in the Natural production area.

The permit to construct will supersede permit to construct number 07-7-0045 M issued on August 22, 1997, permit to construct number 015-7-0045 M issued October 2, 2001 and permit to construct - number 015-7-0045 M issued November 9, 2007.

This source is subject to the conditions described on the attached pages.

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Program Manager

  
Director, Air and Radiation Management Administration



**W.L. GORE & ASSOCIATES, INC.**  
**CHERRY HILL**  
**PERMIT TO CONSTRUCT CONDITIONS**  
**PERMIT NO. 015-0079-7-0045**

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**Part A – General Provisions**

- (1) The following Air and Radiation Management Administration (ARMA) permit-to-construct applications are incorporated into this permit by reference:
  - (a) Application for Process/Manufacturing Equipment (AMA-5) received June 15, 1989, May 19, 1997 and June 12, 2007. [Five drum dryers - CH#1045, CH#1314, CH#1381, CH#1632, & CH#2056] revised to include process update in the Natural PTFE manufacturing area.  
**Application for Processing or Manufacturing Equipment (Form 5) received September 16, 2008 for replacement extruder [CH74837]**
  - (b) Form 5A: Summary of Demonstrations for Meeting the Ambient Impact Requirement (26.11.15.05) and the T-BACT Requirement (26.11.15.06) received May 19, 1997 and June 12, 2007. [Five drum dryers - CH#1045, CH#1314, CH#1381, CH#1632, & CH#2056] revised to include process update in the Natural PTFE manufacturing area.  
**Form 5A: Summary of Demonstrations for Meeting the Ambient Impact Requirement (26.11.15.05) and the T-BACT Requirement (26.11.15.06) received October 16, 2008 via email for replacement extruder [CH74837].**
  - (c) Form 5B: Emission Data received May 19, 1997 and June 12, 2007. [Five drum dryers - CH#1045, CH#1314, CH#1381, CH#1632, & CH#2056] revised to include process update in the Natural PTFE manufacturing area.  
**Form 5B: Emission Data received October 16, 2008 via email for replacement extruder [CH74837].**
  - (d) Application for Permit to Construct Gas Cleaning or Emission Control Equipment received September 4, 2001. [For SARA installation]
  - (e) Letter dated May 23, 2007 from company requesting a process update to reflect that the Oxidizer Control System (OCS) controls the process unit. [Five drum dryers - CH#1045, CH#1314, CH#1381, CH#1632, & CH#2056] received June 12, 2007.



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- (f) **Supplemental Information [Emissions Calculations] received September 16, 2008 for replacement extruder [CH74837]**

If there are any conflicts between representations in this permit and representations in the applications, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department") and the Cecil County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:
- (a) inspect any construction authorized by this permit;
  - (b) sample, as necessary to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;
  - (c) inspect any monitoring equipment required by this permit;
  - (d) review and copy any records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and
  - (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.
- (3) The Permittee shall notify the Department prior to increasing quantities and/or changing the types of any materials referenced in the application or limited by this permit. If the Department determines that such increases or changes constitute a modification, the Permittee shall obtain a permit-to-construct prior to implementing the modification.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of nuisance or air pollution.
- (5) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.
- (6) This permit to construct will supersede permit to construct number 07-7-0045 M issued August 22, 1997; permit to construct number 015-7-0045 M issued October 1, 2001 and permit to construct number 015-7-0045 M issued November 9, 2007.
- (7) The addition of the extruder qualifies as an "Off Permit" change to the facility's Part 70 Operating Permit. The Department recognizes the permit to construct application as written notification of the proposed change and should be included in the application for the next renewal of the Part 70 permit.

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**Part B – Applicable Regulations**

- (1) This source is subject to all applicable federally enforceable State air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.02.09A – Sources subject to Permits to Construct and Approval. “A person may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits to construct and approvals: (6) All sources, including installations and air pollution control equipment, except as listed in Regulation .10 of this chapter--permit to construct required.”
  - (b) COMAR 26.11.03.14A – Revisions of Part 70 permits – General Requirements. “The Permittee shall submit an application to the Department to revise a Part 70 permit when required under Regulations. 15-.17 of this chapter.”  
*Note: Application was submitted with the permit to construct application package.*
  - (c) COMAR 26.11.06.02C(1) – Visible Emission Standards. “In Areas I, II, V, and VI, a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is greater than 20 percent opacity.”  
COMAR 26.11.06.02A(2) – Exception. The visible emission standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.”
  - (d) COMAR 26.11.06.03B(1) – Particulate Matter. “Installations Constructed On or After January 17, 1972. A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 kg/dscm).”
  - (e) COMAR 26.11.19.02I - Good Operating Practices, Equipment Cleanup, and VOC Storage.
    - “(1) Applicability. The requirements in this section apply to a person who owns or operates an installation that is subject to any requirement in this chapter.
    - (2) Good Operating Practices.
      - (a) A person who is subject to this section shall implement good operating practices to minimize VOC emissions into the atmosphere.
      - (b) Good operating practices shall, at a minimum, include the following:



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- (i) Provisions for training of operators on practices, procedures, and maintenance requirements that is consistent with the equipment manufacturers' recommendations and the source's experience in operating the equipment, with the training to include proper procedures for maintenance of air pollution control equipment;
- (ii) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use;
- (iii) As practical, scheduling of operations to minimize color or material changes when applying VOC coatings or other materials by spray gun;
- (iv) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and
- (v) As practical, mixing or blending materials containing VOC in closed containers and taking preventive measures to minimize emissions for products that contain VOC.
- (c) A person subject to this regulation shall:
  - (i) Establish good operating practices in writing;
  - (ii) Make the written operating practices available to the Department upon request; and
  - (iii) Display the good operating practices so that they are clearly visible to the operator or include them in operator training.
- (3) Equipment Cleanup.
  - (a) A person subject to this section shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process and coating application equipment, including containers, vessels, tanks, lines, and pumps.
  - (b) Reasonable precautions for equipment cleanup shall, at a minimum, include the following:
    - (i) Storing all wastes and waste materials, including cloth and paper that are contaminated with VOC, in closed containers;
    - (ii) Preparing written standard operating procedures for frequently cleaned equipment, including when practical, provisions for the use of low-VOC or non-VOC materials and procedures to minimize the quantity of VOC materials used;
    - (iii) Using enclosed spray gun cleaning, VOC-recycling systems and other spray gun cleaning methods where practical that reduce or eliminate VOC emissions; and
    - (iv) Using, when practical, detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment.
- (4) VOC Storage and Transfer.



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- (a) A person subject to this section who stores VOCs shall, at a minimum, install conservation vents or other vapor control measures on storage tanks with a capacity of 2,000 gallons or more, to minimize VOC emissions.
- (b) A person subject to this section shall, at a minimum, utilize vapor balance, vapor control lines, or other vapor control measures when VOCs are transferred from a tank truck into a stationary storage tank with a capacity greater than 10,000 gallons and less than 40,000 gallons that store VOCs or materials containing VOCs, other than gasoline, that have a vapor pressure greater than 1.5 psia."
- (f) **COMAR 26.11.19.16 C & D. – Control of VOC Equipment Leaks**  
"A person subject to this regulation shall comply with all of the following requirements:
  - (1) Visually inspect all components on the premises for leaks at least once each calendar month.
  - (2) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.
  - (3) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours.
  - (4) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part.
  - (5) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipe fittings.
  - (6) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number. The log shall be made available to the Department upon request. Leak records shall be maintained for a period of not less than 2 years from the date of their occurrence.**Exceptions.** Components that cannot be repaired as required in this regulation because they are inaccessible, or that cannot be repaired during operation of the source, shall be identified in the log and included within the source's maintenance schedule for repair during the next source shutdown.
- (g) **COMAR 26.11.19.30E - General Requirements for FPM Process Installations.**
  - "(1) A person who owns or operates an FPM process installation that has actual uncontrolled VOC emissions of 50 pounds or more per day shall vent the emissions into a thermal oxidizer system or other control method approved by the Department to destroy or reduce VOC emissions by 85 percent or more, overall.
  - (2) If a thermal oxidizer is installed, the oxidizer combustion chamber shall be:

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- (a) Operated at a minimum combustion chamber temperature of 1400°F or other temperature approved by the Department that is demonstrated to achieve compliance with this regulation;
  - (b) Equipped with a continuous temperature monitor to record the oxidizer temperature; and
  - (c) Equipped with an alarm system that alerts the operator when the oxidizer combustion chamber temperature is less than the approved temperature; and
  - (d) Equipped with an interlock system that prevents operation of the FPM installation unless the approved control system is operating.
- (3) If a source uses an alternative control method approved by the Department, the alternative control method shall be monitored as required by the Department.
- (4) Equipment that is installed for the purpose of treating emissions or monitoring shall be operated, maintained, and as applicable, calibrated in accordance with the equipment vendor's specifications.
- (5) A person who owns or operates an FPM compounding and tape or shape-forming installation shall minimize fugitive emissions of VOC by:
- (a) Immediately enclosing all wet FPM during storage; and
  - (b) Covering dipping troughs when not in operation.
- (6) A person who owns or operates an FPM coating installation that has actual uncontrolled VOC emissions of 20 pounds or more per day may not use a coating that has a VOC content exceeding 2.9 pounds per gallon unless the installation is equipped with a control device that meets the requirements in §E(2), (3), and (4) of this regulation."
- (h) COMAR 26.11.19.30F - Demonstration of Compliance. "Compliance with this regulation shall be demonstrated using the applicable VOC test methods specified in COMAR 26.11.01.04C or other test method approved by the Department."
- (2) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:
- (c) COMAR 26.11.06.08 - Nuisance. "An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."
  - (d) COMAR 26.11.06.09 - Odors. "A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that nuisance or air pollution is created."
  - (g) COMAR 26.11.15.05A - Control Technology Requirement. "A person may not construct, reconstruct, operate, or cause to be constructed, reconstructed, or operated any new installation or new source that will discharge a toxic air pollutant to the atmosphere without installing and operating T-BACT."



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- (h) COMAR 26.11.15.06A – Ambient Impact Requirement.
- (1) "Except as provided in Sec. A(2), of this regulation, a person may not construct, modify, or operate or cause to be constructed, modified, or operated any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health; and
- (2) If a new installation or source will discharge a TAP that is not listed in COMAR 26.11.16.07, and will be part of an existing premises, then emissions of that TAP from existing sources or existing installations on the premises may be omitted from a screening analysis unless the TAP is added to COMAR 26.11.16.07."

**Part C – Construction & Operating Conditions**

- (1) Except as otherwise provided in this part, the dryers [Five drum dryers - CH#1045, CH#1314, CH#1381, CH#1632, & CH#2056] shall be modified and operated in accordance with specifications included in the applications.
- (2) Except as otherwise provided in this part, the extruder [CH74837] shall be constructed in accordance with specifications included in the incorporated applications.
- (3) All VOC containing materials shall be stored in closed containers.
- (4) The existing oxidizer control system (OCS) shall control emissions from the dryers [Five drum dryers - CH#1045, CH#1314, CH#1381, CH#1632, & CH#2056]. The OCS is now permitted under permit to construct number 015-6-0173.
- (5) For Control Equipment  
The Oxidizer Control System (OCS) consisting of three thermal oxidizers. The Oxidizer Control System shall be equipped with temperature monitors and recorders to continuously monitor and record the combustion gas exit temperature, which shall not be less than 1400 °F any time a controlled process is in operation. The Permittee shall perform checks semiannually on the thermocouples that monitor the temperatures to the oxidizers for accuracy. Documentation of each check shall be maintained on site for a period of at least five years and made available to the Department upon request.

**Part D – Record Keeping and Reporting**

- (1) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:
- (a) Records of material usage in the dryers [Five drum dryers - CH#1045, CH#1314, CH#1381, CH#1632, & CH#2056] in the Natural PTFE manufacturing area.



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- (b) Monthly record of VOC material usage and days of operation of the extruder [CH74837].
  - (c) All written descriptions of "good operating practices" designed to minimize emissions of VOC.
  - (d) VOC leak detection and repair logs that include identification of the persons who conducted the leak detection inspections, the dates on which the inspections were conducted, the findings during the inspections, a listing by tag identification number and a description of all leaks discovered, and the date and nature of all leak repairs effected.
- (2) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07C, occurrences of excess emissions to the Compliance Program of the Air and Radiation Management Administration.